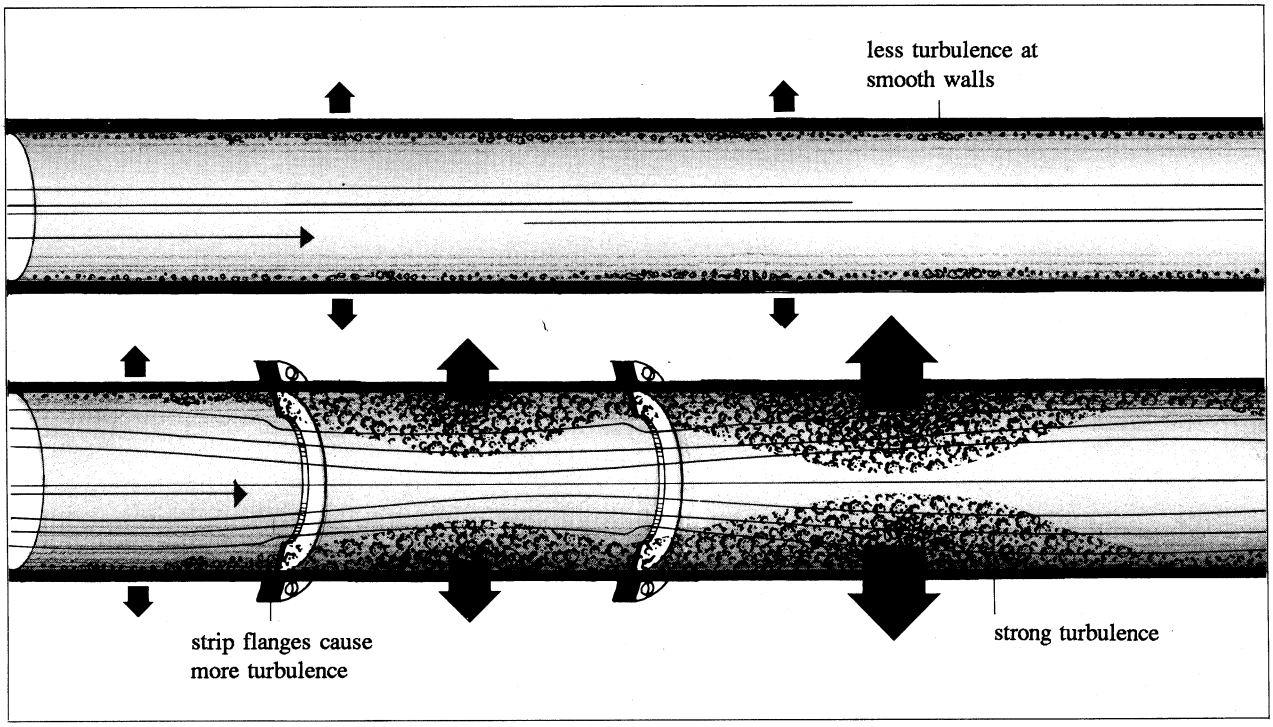
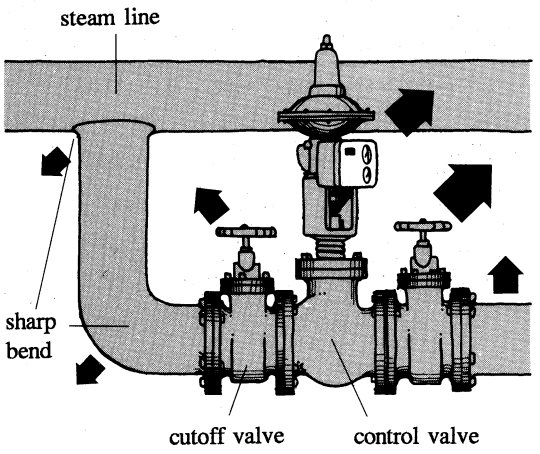
DUCTS WITHOUT OBSTRUCTIONS PRODUCE THE LEAST AMOUNT OF NOISE FROM TURBULENCE

When there is flow in ducts or pipes, there is always some turbulence at the duct walls. The noise from turbulence increases if the flow abruptly changes direction, if the flow speed increases, or if objects partially block the flow.

Principle



Application with a piping system



Example

A branch of a steam line has three valves which produce a loud shrieking sound. The branch has two sharp bends which also produce a lot of noise.

Control Measure

A new branch is created with more gradual bends. Pieces of tubing are placed between each valve so that turbulence is reduced or eliminated before the stream reaches the valve.